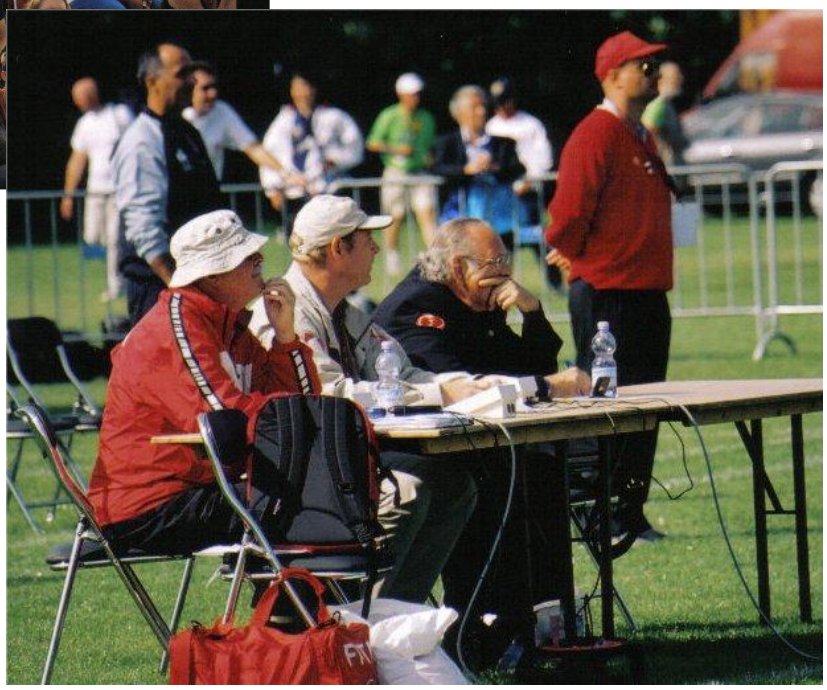
DANAGE TIMER System – Controller User Manual

The SCORING System
is also part of the concept



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Front page: The European Junior Championship 2005, Denmark August 2005

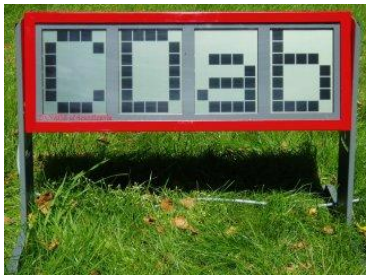
The DANAGE TIMER Control and SCORING System used at a tournament in the Netherlands, July 2005

The Major Components

The TIMER Control System includes:

- One control box (the TIMER Controller) with a standard 110-240V AC / 24V DC power unit. The system can also be powered by car batteries (series connected, 2 x 12V = 24V). One battery is sufficient if the maximum distance to the Displays is less than 50 metres.

- A set of TIMER Displays. Two or more Displays each with Red, Yellow and Green LEDs and a 3-element LCD display. The LEDs always show the colour appropriate to the timer situation.



- One or more ABCD Displays, with a 4-element LCD display showing the shooting order, e.g. CDab (the capital letters CD indicate that the C and D archers are on the shooting line, the small letters ab show that the A and B archers are next).

- One or two Sound Units. The Sound Volume and the Tone can be adjusted at the TIMER Controller. A tone difference can be used in a situation where two finals are in progress at the same time.

The System

The TIMER Controller is factory programmed for most of the shooting sequences required for World Archery (FITA) tournaments and for regional or local club tournaments.

The TIMER Controller can also be programmed by the user, so it is possible to create any special timing sequence that may be need for a special archery event or for training. A Stopwatch function is also built-in, and this can add new ideas to archery training.

Danish Championship 2005, Gladsaxe Stadium August 2005

Connecting the Units

The TIMER Controller, the TIMER Displays, the ABCD Displays and the Sound Units are connected together in series. Cables are connected from one unit to the next and so on. There is no difference between input and output, which means that it is not possible to make a wrong connection.

Getting Started

When power is applied to the TIMER Controller, the date of the software version installed will be shown for a few seconds. The TIMER Controller will then show **TEST SEQUENCE <Menu> / <Enter>**. (Note that the TIMER Controller always prompts the user to press the most appropriate key.)

There are two options, the **<Enter>** key or the **<Menu->** key.

- The **<Enter>** Key. Pressing and holding down the **<Enter>** key will run the test sequence. The TIMER Displays and ABCD Displays will show the digits rolling over one by one; the LEDs will change from Red to Yellow and Green; and the Sound Units will be activated every time the digits change from 9 to 0. This proves that the connections are good and the equipment is working.

- The **<Menu->** Key. Pressing the **<Menu->** key a number of times will move the TIMER Controller through the menu system to select the required option. Once a shooting sequence is shown on the TIMER Controller, just press the **<Enter>** key to select the sequence and then use the **<Start>** key to get the tournament started.

The Menu Groups

There are 3 Menu groups:
- MENU GROUP 1
- MENU GROUP 2
- SET-UP MENU

There is a diagram of the Menu System on page 14

MENU GROUP 1
When the TIMER Controller is first switched on, MENU GROUP 1 is automatically selected. Press the **<Menu->** key to move through the Menu Group. The options available are:

- TEST SEQUENCE
  - The initial test of the total system set-up.
- RANKING ROUND 1: 10-120-30 A/B
  - This shooting sequence is for an indoor tournament where the archers are shooting in 2 "waves" or details. (A/B or AB/CD). The sequence is programmed for two Beeps calling the archers to the shooting line counting down from 10 sec. and one Beep to start the shooting time of 120 sec. The Yellow light shows after 90 sec. (30 sec. before the 120 sec. run out). The TIMER Controller is designed for an automatic or manual shift of details (A/B or AB/CD). The user can program the TIMER Controller to allow for 1, 2, 3 or 4 details.
  - This shooting sequence is also used for outdoor shooting ends of 3 arrows. (3 arrows = 120 sec.).
- MENU GROUP 2
  - Press the **<Enter>** key to get to MENU GROUP 2. The sequences are described on page 5.
- SET-UP MENU
  - Press the **<Enter>** key to get to the SET-UP menu. The Menu functions are described on page 7

MENU GROUP 2

From MENU GROUP 1 or SET-UP Menu, press the **<Menu->** key until the text MENU GROUP 2 is shown in the display. Then press the **<Enter>** key to move into MENU GROUP 2. The shooting sequences available are:

- RANKING ROUND 2 10-240-30 A/B
  - This shooting sequence is similar to RANKING ROUND 1, but with a shooting time of 240 secs. This shooting sequence (RANKING ROUND 2) is used for outdoor shooting ends of 6 arrows. (6 arrows = 240 sec.).
- ELIMINATION RD. 1 10-120-30
  - This shooting sequence is similar to RANKING ROUND 1, but with only one detail shooting. It is used for the initial stages of match play events (Olympic round, Compound Match round and Indoor Match round) when all archers shoot at the same time.
- ELIMINATION RD.2 10-240-30
  - This shooting sequence is similar to ELIMINATION RD 1, but with a longer shooting time.
- FINAL 10-120-30
  - This shooting sequence is similar to ELIMINATION RD 1.
- FINAL A 10-020 - 3 Series A means Alternate match play
  - This shooting sequence is used for alternate shooting only, switching between the archers after each arrow. It is programmed for each archer to shoot 3 arrows per end. The TIMER Displays must be set as Left- and Right- Displays (the setting is done by pressing a small button on the back of the Displays).
  - The starting archer must be selected on the TIMER Controller. The judge will indicate which archer is to shoot first (e.g. Right), and the operator (DOS) chooses that archer with the **<Next L<>R AB..>** key. The two LEDs on the TIMER Controller will show which archer has been selected.
  - The judge will indicate when the end is to begin, and the operator (DOS) then presses the **<Start>** key. There will be 2 Beeps for both archers to go to the shooting line.
  - After the get-ready time, there will be 1 Beep for the first archer (e.g. Right) only to shoot. The TIMER Display will indicate, by LED and time, which is to shoot.
  - After the shooting time, there will be 1 Beep for the next archer (e.g. Left) to shoot. Again, the TIMER Displays will indicate, by LED and time, which is to shoot.
  - The system switches alternately between the archers.
  - When the second archer has shot the last arrow, there will be 3 Beeps for the scoring to begin.
  - The system then prompts the operator (DOS) to select which archer is to shoot first the next end, which can start as soon as the selection is made.
- FINAL DA 10-020 - 3 Series DA means Double Alternate match play
  - This shooting sequence is used at tournaments where there are two finals at the same time. It is a slightly more complicated set-up based on two TIMER Controllers and associated displays, together with one additional common module. The function is very user-friendly; please ask for a special instruction sheet.
- FINAL MULTI 10-000
  - This sequence is programmed to give a 10-second get-ready time followed by an infinite shooting time. It is for match play where more than 2 or more matches are shot at the same time using alternate shooting, but with the timing for each match being given by the line judge for the match. When all matches have finished, the operator (DOS) presses the **<Stop>** key to give 3 Beeps for the scoring to begin.
- SET SYSTEM 1 10-120-30
  - This shooting sequence is similar to RANKING ROUND 1, but with only one detail shooting in Sets. It is used for the initial stages of match play events when all archers shoot at the same time.
- SET SYSTEM 2 10-240-30
  - This shooting sequence is similar to SET SYSTEM 1, but with a longer shooting time.

MENU GROUP 2, continued:

- SET SYSTEM A 10-020 - 3 Series A means Alternate match play
  - This shooting sequence is similar to FINAL A and is used when shooting in Sets.
- SHOOT-OFF 10-40-30
  - This shooting sequence for a single-arrow shoot-off when the archers are shooting at the same time. As programmed, this gives a shooting time of 40 sec. However, the shooting time can be programmed by the operator (DOS) to 20 sec. or as required.
- SHOOT-OFF A 10-20 - 1 Series A means Alternate match play
  - This shooting sequence is for a single-arrow match play shoot-off when the archers are shooting alternately.
- TEAM FINAL 10-120-30
  - This shooting sequence is for team shooting with all teams shooting together and is programmed for 2 Beeps calling the archers to get ready, counting down from 10 sec. and 1 Beep to start the shooting time of 120 sec. The Yellow light shows after 90 sec. (30 sec. before the 120 sec. run out).
- TEAM FINAL 1 A 10-120-30 - 2 Series A means Alternate match play
  - This shooting sequence is similar to FINAL A (which is for individuals) but designed for Alternate team shooting. There are 2 shooting periods for each team. The system "remembers" the shooting time for each team separately and displays the remaining time when it is that team's turn to shoot.
- TEAM FINAL DA 10-120-30 - 2 Series DA means Double Alternate match play
  - This shooting sequence is similar to TEAM FINAL 1 A, but is used when there are 2 matches taking place at the same time. Additional equipment is required, please ask for a special instruction sheet.
- SHOOT-OFF TEAM 10-60-30
  - This shooting sequence is used for a team shoot-off when both teams shoot at the same time.
- SH-OFF TEAM A 10-60-30 1 Series
  - This shooting sequence is used for a team shoot-off when the teams shoot alternately.
- MIX TEAM FINAL 10-80-30
  - This shooting sequence is for the Mixed Team (2 archers per team) match play, with both teams shooting at the same time.
- MIX TEAM FIN. A 10-80-30 - 2 Series
  - This shooting sequence is for the Mixed Team (2 archers per team) match play, with the teams shooting alternately. There are 2 shooting periods for each team. The system "remembers" the shooting time for each team separately and displays the remaining time when it is that team's turn to shoot.
- SH-OFF MX TEAM 10-040-30
  - This shooting sequence is for the Mixed Team (2 archers per team) match play shoot-off, with both teams shooting at the same time.
- SH-OFF MX TEM A 10-040-30 - 1 Series
  - This shooting sequence is for the Mixed Team (2 archers per team) match play shoot-off, with the teams shooting alternately.
- TEAM FINAL 2 A 10-120-30 - 2 Series A means Alternate match play
  - This shooting sequence is the same as TEAM FINAL 1 A but can be reprogrammed by the user to suit local circumstances.
- FREE 10-120-30
  - A sequence ready for programming by the operator (DOS) for tournaments or other purposes.
- STOPWATCH
  - A special function e.g. a match where the winner scores 100 points in the shortest time.
- STOPWATCH A A means Alternate shooting
  - The Alternate stopwatch function can be used to time 2 archers shooting alternately, for practice or otherwise.

MENU GROUP 2, continued:

- MENU GROUP 1
  - Press the **<Enter>** key for the MENU GROUP 1
- SET-UP MENU
  - Press the **<Enter>** key for the SET-UP MENU

SET-UP MENU:

From MENU GROUP 1 or MENU GROUP 2, press the **<Menu->** key until the SET-UP MENU is shown in the display. Then press the **<Enter>** key to move into the SET-UP menu. To enter the programming mode for the displayed parameter, press the **<Prog+>** key. The parameters that can be set are:

- TIME 1 ARROW T1
  - The T1 or lead-in time for the "1 arrow" function, used if an archer has a technical problem and needs to shoot one (or more arrows).
- TIME 1 ARROW T2
  - The T2 or shooting time for the "1 arrow" function, used if an archer has a technical problem and needs to shoot one (or more arrows). The time should not be changed if an archer needs to shoot two or more arrows – see the description of the Time 1 Arrow function on page 10
- TIME 1 ARROW T3
  - The T3 or Yellow light time for the "1 arrow" function, used if an archer has a technical problem and needs to shoot one (or more arrows).
- SOUND VOLUME
  - The volume of the sound can be programmed via the **<Menu–>** key and the **<Prog+>** key from 0 to 10 where 0 means that the sound is disabled and 10 means maximum volume. Press the **<Enter>** key to store the selected setting.
- SOUND TONES
  - The tone of the sound can be programmed via the **<Menu–>** key and the **<Prog+>** key. It is possible to get 10 different sound tones. This special function could be used for tournaments where two finals are performed at the same time (using two controllers and two sound units). Press the **<Enter>** key to store the selected setting.
- SOUND ON TIME
  - The length of the Beep can be adjusted via the **<Menu–>** key and the **<Prog+>** key ranging from 0 to 10 where 0 is a very short Beep and 10 the longest Beep. Press the **<Enter>** key to store the selected setting. (2 is the normal setting)
- SOUND OFF TIME
  - The no sound time (the time between 2 Beeps) can be adjusted via the **<Menu–>** key and the **<Prog+>** key ranging from 0 to 10 where 0 means a very short interval between the Beeps and 10 means the longest interval. Press the **<Enter>** key to store the selected setting.
- FLASH ON TIME
  - The LED light ON time (Red flashing light) can be adjusted via the **<Menu–>** key and the **<Prog+>** key ranging from 0 to 10 where 0 is a very short flashing light (the light is hardly seen) and 10 the longest time the flashing light is ON. Press the **<Enter>** key to store the selected setting. (5 is the normal setting).
- FLASH OFF TIME
  - The light off time (the interval between when the light is ON) can be adjusted via the **<Menu–>** key and the **<Prog+>** key ranging from 0 to 10 where 0 is a very short interval and 10 the longest interval. Press the **<Enter>** key to store the selected setting. (5 is the normal setting).
- LED BRIGHTNESS
  - The brightness of the LEDs on the TIMER Displays can be adjusted via the **<Menu–>** key and the **<Prog+>** key ranging from 0 to 10 where 0 means that the brightness is at the lowest level and 10 means maximum brightness. Press the **<Enter>** key to store the selected setting. (5 is the normal setting).

SET-UP Menu continued:

- DISPLAY LCD
  - The contrast of the LCDs on the TIMER Displays and ABCD Displays can be adjusted via the **<Menu–>** key and the **<Prog+>** key ranging from 0 to 10 where 0 means minimum contrast and 10 means maximum contrast. Press the **<Enter>** key to store the selected setting. (5 is the normal setting).
- CONTROLLER LCD
  - The contrast of the LCDs on the TIMER Controller Display can be adjusted via the **<Menu->** key and the **<Prog+>** key ranging from 0 to 10 where 0 means minimum contrast and 10 means maximum contrast. Press the **<Enter>** key to store the selected setting. (5 is the normal setting).
- 0.1 SEC ON/OFF
  - The TIMER Control System can show the time as 1/1 sec. or 1/10 sec. The setting can be changed by pressing either the **<Menu–>** key or the **<Prog+>** key. Press the **<Enter>** key to store the selected setting.
- LANGUAGE
  - The TIMER Controller will guide the operator (DOS) in different languages – the desired language can be selected via the **<Menu–>** key and the **<Prog+>** key. Press the **<Enter>** key to store the selected setting
- DEFAULT GROUPS (factory settings)
  - This function is used to reset the TIMER Controller shooting sequences according to the settings given in this manual, the "factory setting". As each element of each sequence can be programmed separately, it is useful to be able to return to a known state. When in Programming mode, press the **<Enter>** key to reset the TIMER Controller shooting sequences to the factory settings; press **<Stop Esc>** to exit without changing the settings.
- DEFAULT SET-UP (factory settings)
  - This function is used to reset the TIMER Controller Set-up parameters to the initial settings, the "factory setting". As each parameter can be programmed, it is useful to be able to return to a known state. When in Programming mode, press the **<Enter>** key to reset the TIMER Controller Set-Up parameters to the factory settings; press **<Stop Esc>** to exit without changing the settings.
- MENU GROUP 1
  - Press the **<Enter>** key for the MENU GROUP 1
- MENU GROUP 2
  - Press the **<Enter>** key for the MENU GROUP 2

Programming Shooting Sequence Settings

It is possible to change any of the settings of a shooting sequence e.g. the shooting time, the series of arrows in connection with a final etc. Find the sequence using the **<Menu->** key and then press the **<Prog+>** key to enter the programming mode.

The picture on page 9 shows the TIMER Controller display with a shooting sequence, such as ELIMINATION ROUND 1, in programming mode. The parameters are:

- T1 is the "get ready" time – the number of seconds from the 2 Beeps for the archers to go to the shooting line to the 1 Beep for the archers to shoot the first arrow. The setting can be anything between 0 and 99 sec. but the standard settings are 0, 10 or 20 sec. A setting of 0 means that the function is disabled and there is no "get-ready" time.
- T2 is the full shooting time. The setting can be anything between 0 and 999 sec. but the standard settings are 20, 40, 120, 240 sec.
- T3 is the time for the Yellow light. The setting can be anything between 0 and 99 sec. but the standard settings are 0 or 30 sec. A setting of 0 means that the function is disabled and there is no Yellow light shown.

- SER is the number of shooting periods within the sequence. The settings can be 1, 2, 3 or 4. The SER setting is dependent on the type of shooting sequence.
    - For sequences where all archers shoot together (eg RANKING ROUND 1) this is the number of "waves" or details shooting, A/B, AB/CD, A/B/C etc.
    - For sequences where individual archers shoot alternately, this is the number of arrows per archer in end or set. The normal settings are 1 or 3.
    - For sequences where teams shoot alternately, it is the number of shooting periods per team in each end. The normal settings are 1 or 2
- M is the number for the menu that includes this particular shooting sequence. The setting can only be 1 or 2, meaning MENU GROUP 1 or MENU GROUP 2. The idea is to programme all the shooting sequences to be used at tournament as M1 and all the other shooting sequences as M2. This set-up will give a quick and user-friendly way to change shooting sequences e.g. from ELIMINATION ROUND 1 to SHOOT OFF and back again – just use the **<Menu–>** key.

Programming a Shooting Sequence

Timer Controller Display – Programming Mode

In the picture above, the T1 "get-ready" time is shown set to 40 sec; the T2 shooting time is 120 sec. and the T3 time for the yellow light is 30 sec. SER 1 shows that all the archers are shooting at the same time. M 1 means that this sequence is placed in MENU GROUP 1.

The digit with the flashing cursor (4 in the picture) can be changed by using the **<Menu–>** key (minus) and the **<Prog+>** key (plus). To move to the next digit, press the **<Enter>** key once. When all settings are as required either:

Press the **<Stop Esc>** key

Or

Continue to press the **<Enter>** key until the flashing cursor has moved across the screen.

The TIMER Controller will exit the programming mode, all the settings will be saved in the memory and the shooting sequence name will be displayed. The shooting sequence is now ready for use. Note that as all the settings are be stored in the TIMER Controller memory, they will not be lost if power is removed.

Special Sequence - Time 1 Arrow

The powerful Time 1 Arrow program is a special sequence that can be activated whether a normal shooting sequence is running or not. The program allows the operator (DOS) to fully control an archer who has to make up arrows, such as after a bouncer, pass-through or equipment failure.

- First, when a normal shooting sequence is running, an archer might have to make up arrows following a bouncer or passthrough. These arrows are normally shot at the end of the detail.
    - When told during shooting that an archer needs to make up arrows at the end of the detail, the operator (DOS) presses the **<Time 1 Arrow>** key once. The Timer Controller display will indicate "1 ARROW". At the end of that shooting period, there will be 5 Beeps and the timer will stop. If the archer has more than one arrow to make up, press the **<Time 1 Arrow>** key once more for each additional arrow. The TIMER Controller will indicate the number of arrows and the time available. If required, adjustments to the overall time can be made now by using the **<Prog+>** key and the **<Menu->** key. When the time is correct, press the **<Enter>** key, and the TIMER Controller is prepared.
    - When ready, press the **<Start>** key. There will be the chosen "get-ready" time, followed by the required shooting time, with the normal sound, light and timer signals.
    - When this make-up shooting time has finished, the program will automatically return to the main shooting sequence, moving to the next detail with 2 Beeps, or completing the shooting with 3 Beeps (for the scoring to begin) as required.
    - **If the operator (DOS) makes a mistake** and presses the **<Time 1 Arrow> k**ey in error during shooting, she or he can just press the key once more and the function will be cancelled.
- Secondly, when there is a shooting sequence shown in the TIMER Controller display, but it is not running. Shooting may have stopped for scoring or distance change, but an archer may have some arrows to make-up, such as after an equipment failure. The operator (DOS) will be told that a special end is required.
    - The operator (DOS) presses the **<Time 1 Arrow>** key the appropriate number of times, once for each arrow to be shot; the TIMER Controller shows the number of arrows and the time. If required, adjustments to the overall time can be made now by using the **<Prog+>** key and the **<Menu->** key. When the time is correct, press the **<Enter>** key. The TIMER Controller is now prepared.
    - To start the special end, press the **<Start>** key. There will be the normal sound, light and timer signals for an end of arrows shot in one detail, but the actual shooting time will depend on the number of arrows to make up.
    - When this make-up shooting time has finished, the Time 1 Arrow function will finish with 3 Beeps and the program will go back to the shooting sequence displayed before the function was used.
    - **If the operator (DOS) makes a mistake** and presses the **<Time 1 Arrow>** key in error, she or he can just press the **<Enter>** key followed by the **<Stop Esc>** key and the function will be cancelled.

- The Time 1 Arrow T1, T2 and T3 times can all be programmed in the SET-UP menu.

The Keyboard

The <Emg Stop> key

- This key is only used in a special situation where it is necessary to give a warning (5 Beeps), stop the time and show Red LEDs. During the 5 Beeps, the TIMER Controller will show EMERGENCY STOP and 000. After the Beeps, the TIMER Controller will show ERROR and the time remaining when the **<Emg Stop>** key was activated. The TIMER Displays will show the time remaining. The operator (DOS) can re-start the time and the shooting by pressing the **<Start>** key. There will be one Beep after the **<Start>** key has been activated. Note that while the time is stopped, it is possible to add extra time by using the **<Prog+>** key. The **<Menu->** key could be used for a correction if somehow the time has to be reduced.

The <Time 1 Arrow> key

- This key activates a special function to control an archer who has to shoot one or more make-up arrows. A full description is on page 10

The <Menu-> key

- This key is used to step through the menu system. The key is also used when programming the TIMER Controller, e.g. to reduce the length of the time.

The <Prog+> key

- This key is used to switch into programming mode. The key is also used when programming the TIMER Controller, e.g. to increase the length of the time.

The <Enter> key

- This key is used for activating a sequence. When in programming mode, it is used to step through the various parameters.

The <Auto Man AB..> key

- This key is used for changing the operation from automatic to manual. Note, it is only special sequences where the manual function is desired, e.g. in connection with higher World Archery (FITA) Tournaments. When set to Auto, the shooting details follow on automatically. When set to Manual, after each shooting time the system will stop. Press the <Start> key to begin the next part of the sequence.

The <Next L <> R AB..> key

- This key is used to set the correct shooting order: for 2 details, A/B or B/A or AB/CD or CD/AB; for 3 waves, ABC/CAB/BCA. The key will also be used to correct the shooting order, e.g. after practice but before scoring ends are shot. Finally, it is used when there is alternate shooting to select which archer/team will start, the Left or the Right.

The <Error Hold> key

- This key is only used in a special situation where it is necessary to stop the shooting and the time. There will be no sound when the key has been pressed but the time will stop and the TIMER Displays will show a Red LED. The TIMER Controller will show ERROR and the time remaining when the **< Error Hold >** key was activated. The TIMER Displays will show the time remaining. The operator (DOS) can re-start the time and the shooting by pressing the **<Start>** key. There will be one Beep after the **<Start>** key has been activated. Note that while the time is stopped, it is possible to add extra time by using the **<Prog+>** key. The **<Menu->** key could be used for a correction if somehow the time has to be reduced.

The <Stop Esc> key

- When there is no shooting sequence running, this acts as an Escape key. Two presses will take the system back to the start of MENU GROUP 1, often the easiest way to select a new shooting sequence.
- When a shooting sequence is running, this key stops the current shooting time period, and moves the program on to the next time period. In this respect, it is also acting as the Start key. The reason is to avoid mistakes if an operator (DOS) thinks that she og he has to use the **<Stop Esc>** key and not the **<Start>** key to start a new detail.

The <Start> key

- This key is used to start a new shooting sequence or to go to the next time period in a shooting sequence. Note that this allows the operator (DOS) to finish a shooting time as soon as all the archers have finished shooting.

<u>Special functions</u> (combination of pressing two keys)

Quick disabling of the sound function:

- At any time when a shooting sequence is NOT running, the sound function can be disabled by pressing the **<Error Hold>** key and the **<Enter>** key at the same time. The TIMER Controller display will indicate that the sound is off. To enable the sound function again, repeat the key presses. The function can be used to test a TIMER Controller set-up before the start of a tournament without having the sound disturbing the archers and without having to use the SET-UP Menu function for disabling the sound function.
- Note, the **<Emg Stop>** function will still be work (5 Beeps) even though the "Quick Disabling" combination has disabled the sound. The 5 Beeps will only be disabled if the sound function is in OFF position via the SET-UP menu.

Manual One Beep

- Press the **<Error Hold>** key and the **<Prog+>** key at the same time. The horn will give one Beep each time this combination of the two keys is activated. This can be to test the sound function or to control the shooting in unusual circumstances.

System Reset

- Any time a shooting sequence is NOT running (even if stopped by use of **<EmgStop>** or **<Error Hold>**, it is possible to reset the TIME Controller back to the initial switch-on state. Press the **<Error Hold>** key and the **<Menu->** key at the same time for reset or re-start. This function can be useful in a situation of operator (DOS) error or if there is a malfunction in the controller.

Additional Information

Display Unit Settings – Alternate Shooting

- When the system is used to control alternate shooting, 2 TIMER Displays are used, one for each archer. An ABCD Display may also be used. The display units must be set correctly when used for Alternate shooting. Repeated presses of a button on the back of the display will switch between a Left display, a Right display and an ABCD display.

The Memory Function – Power Failure

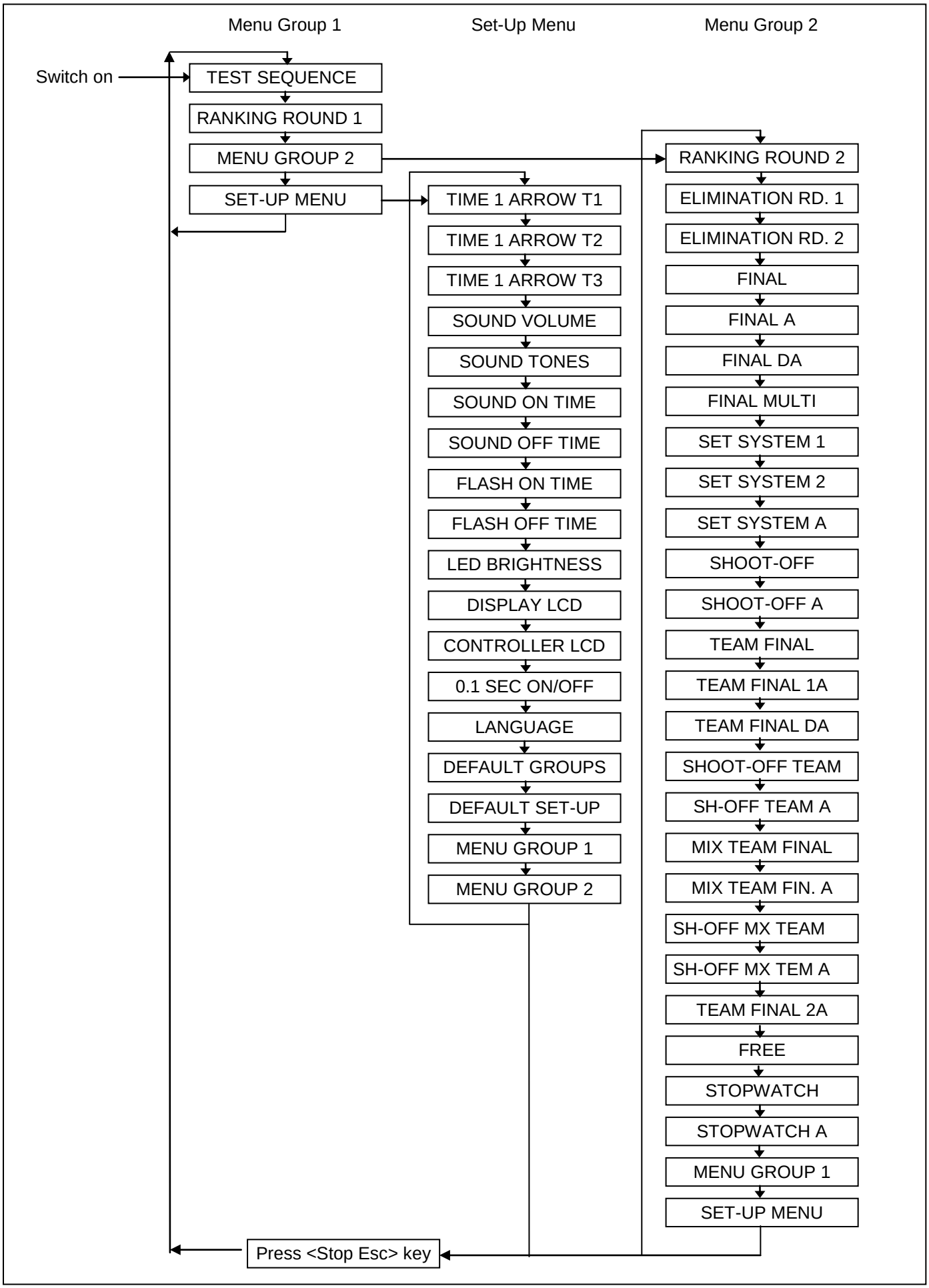
- If there is a power failure when a shooting sequence is running, the TIMER Controller will remember the time and where in the shooting sequence the power failure occurred. As soon as the power is returned, TIMER controller will show the date of the software as normal; a few seconds later, the TIMER Controller will show the name of the shooting sequence, ERROR and the time remaining when the power failure occurred. The TIMER Displays will show the time remaining. The operator (DOS) can re-start the time and the shooting by pressing the **<Start>** key. There will be one Beep after the **<Start>** key has been activated. Note that while the time is stopped, it is possible to add extra time by using the **<Prog+>** key. The **<Menu->** key could be used for a correction if somehow the time has to be reduced.

Battery supply

- The DANAGE TIMER Control System is primarily based on using LCD displays as this provides a perfect solution in bright sunlight and very low power consumption compared to solutions based on LED display. It is possible to run a two day tournament with the equipment powered by two car batteries only. A special connector is available.

Battery Operation

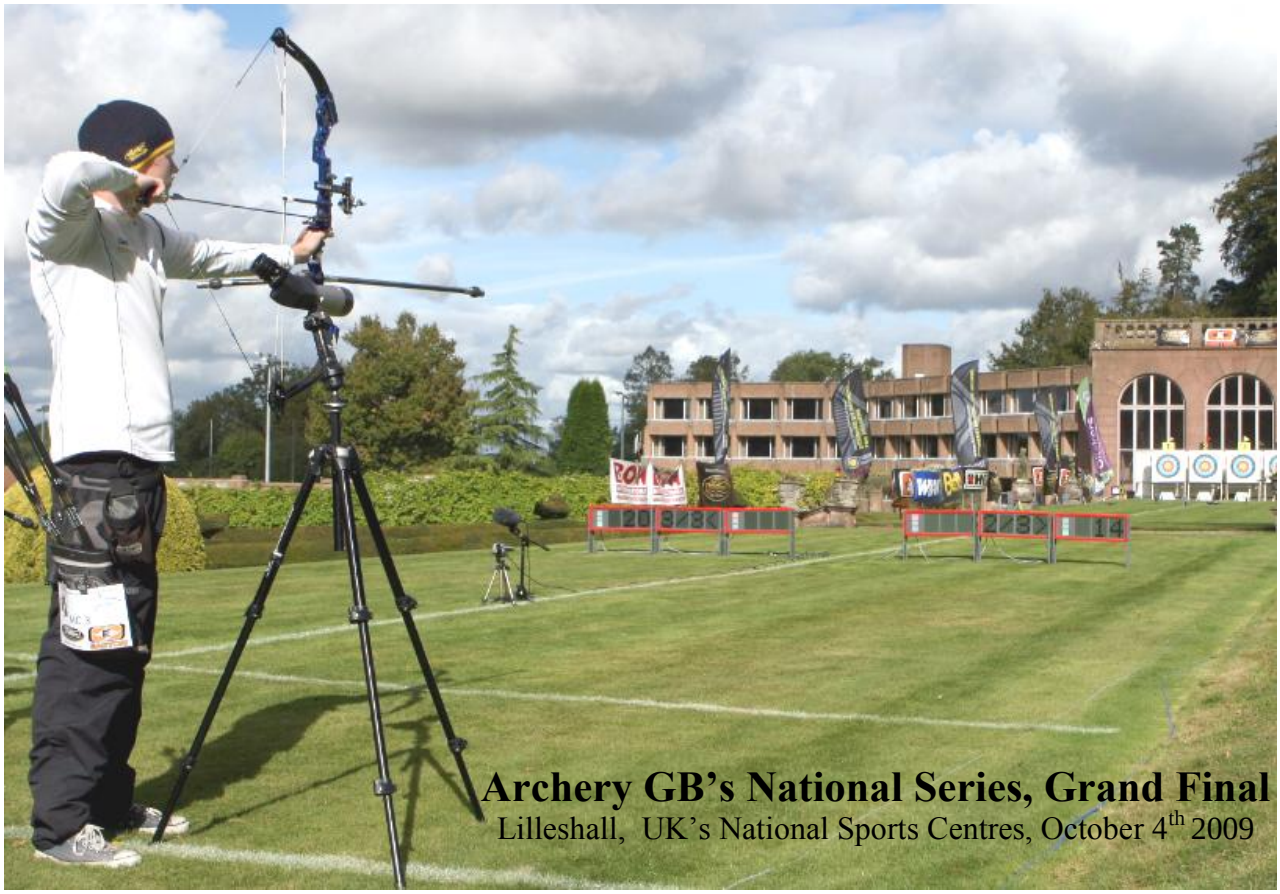
The TIMER Controller Menu System



The European Junior Championship 2005, Denmark August 2005

Face2Face Tournament, the Netherlands December 2008

The European Junior Championship 2005, Germany July 2010

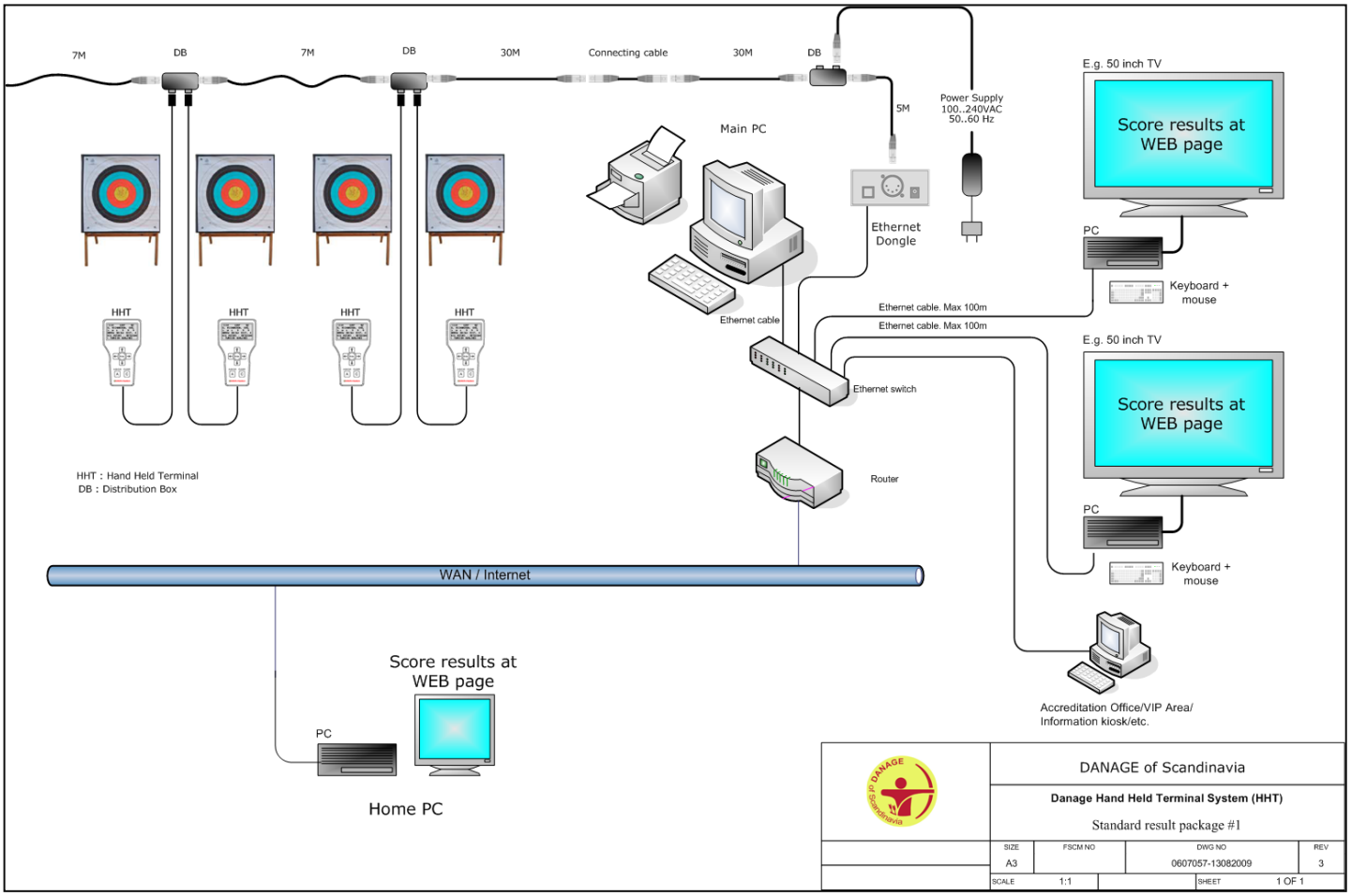


Archery GB's National Series, Grand Final

Lilleshall, UK's National Sports Centres, October 4th 2009

ITALY, European Indoor Championships 2008

DANAGE Hand Held SCORING System:



The new DANAGE Hand Held Scoring System, used for the first time at the World Archery Festival Las Vegas 2009, has now been used for more than 150 tournaments around the world. The IANSEO management software package is part of the unique concept:

The **DANAGE/IANSEO** system is still **The Future of Tournament Scoring – TODAY!**

The DANAGE HandHeld Scoring System has now been used for tournaments in Armenia, Australia, Bulgaria, Colombia, Croatia, Denmark, Germany, Italy, Russia, Slovakia, Spain, Sweden, Switzerland, Spain, USA, Czech Republic - It is probably the best, the most used and important the most user friendly result system available for our sport today - and many years to come.

The system is "build" of very few components: HHTs (Hand Held Terminals), DBs (Distribution Boxes), Power Supply, Communication Module/Ethernet Dongle and Cables. The software for the IANSEO Management System is available on the internet – ready to be installed in your PC. Ethernet switch, Router, extra PCs and Flat Screens to be added according to the topic tournament.

Further info conc. Software, manual, connection diagrams etc., please contact DANAGE of Scandinavia